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SAWAKURI TATSUYA****(54) APPARATUS FOR MEASURING TEMPERATURE
DISTRIBUTION OF ROAD SURFACE****(57) Abstract:**

PURPOSE: To efficiently control the heating of a road surface by embedding a hollow pipe body having an optical fiber being a temp. detection part inserted therein in the surface layer of the road surface.

CONSTITUTION: An optical fiber 1 is inserted in a hollow pipe body 2 composed of plastic. In this case, the optical fiber is suitable to be embedded in a road surface at a place where mechanical stress is relatively low, for example, a footway. Further, the optical fiber 1 is inserted in the hollow pipe body 2 prepared by forming a sheath 2B composed of a hard polyethylene resin or rubber to the outer periphery of a metal corrugated pipe 2A. In this case, the hollow pipe body 2 is suitable to be embedded in the road surface at a place high in mechanical stress, for example, a roadway. This hollow pipe body 2 is embedded in the surface layer 4 of the road surface 3 so that the longitudinal direction thereof becomes parallel to the road surface. By this constitution, the linear or planar temp. distribution of the road surface can be measured only by using one optical fiber as a temp. detection part. Therefore, heat energy for heating the road surface in

order to melt snow or to prevent freezing is controlled to the necessary min. proper quantity to make it possible to reduce energy cost.

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